Natural Gas
Annual Gas Pipeline Safety Seminar

October 29, 2008

Kansas Gas Service
A DIVISION OF ONEOK

Are you prepared for one wild ride this winter....?

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Where does natural gas come from?

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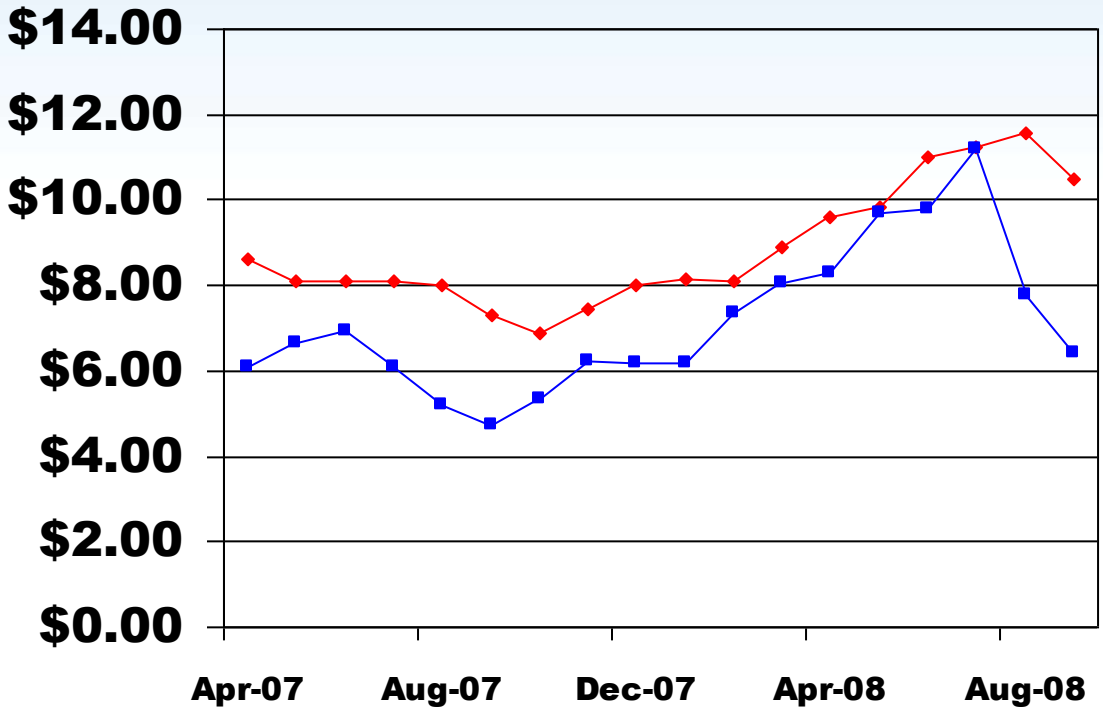
How can I save money?



Most marketers offer index plus or fixed price contracts.

KGS COGR

Southern Star Index

Avg COGR = $8.86
Avg Index = $7.12
Difference = $1.74

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Gas Supply and the Winter Outlook

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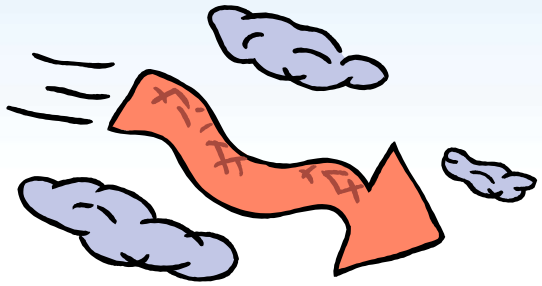
What is the price of gas these days?

In 2007…

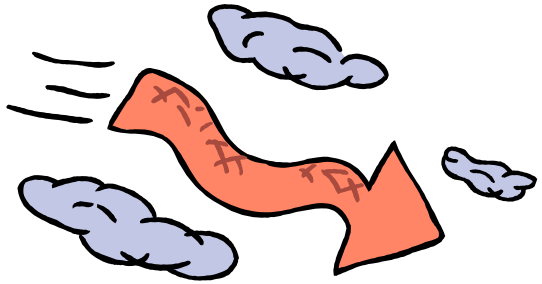
- Summer was warmer than normal
- Few actual hurricanes in the Gulf of Mexico
- Record high storage levels
- Prices dropped



Sept 2007
Index $4.75

In 2008…

- Summer was cooler
- Index prices peaked at $11.20/mcf in July
- Minimal hurricane damage or disruptions
- Currently storage levels are above average but lower than last year
- Prices continue to retreat



Sept 2008
Index $6.41

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Why are energy prices so volatile?

- Unprecedented commodity values
- U.S. dollar weakness
- Unstable financial markets
- Emerging economies
- Political instability in energy supply nations
- Climate change agenda – pricing of carbon
- All links in the supply chain are tight
- Increasing need to invest in infrastructure

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What factors influence the price of gas?

- Long-term
  - Supply and demand could remain tight
  - Major U.S. shale basins gas and Rocky Mountain finds are increasing production
- Short-term
  - Weather (abnormal temperatures and hurricanes)
  - Storage levels
  - Oil prices (tend to set a floor for natural gas prices)

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How much new gas will we need in the future?

- U.S. Demand Forecast (EIA June 2008) :
  - 2005: 22.0 TCF
  - 2008: 23.1
  - 2010: 23.2
  - 2020: 23.3
- Steady increases in use for the residential, commercial, and industrial sectors will be offset by a decrease in the use of natural gas for electric generation which is extremely price sensitive

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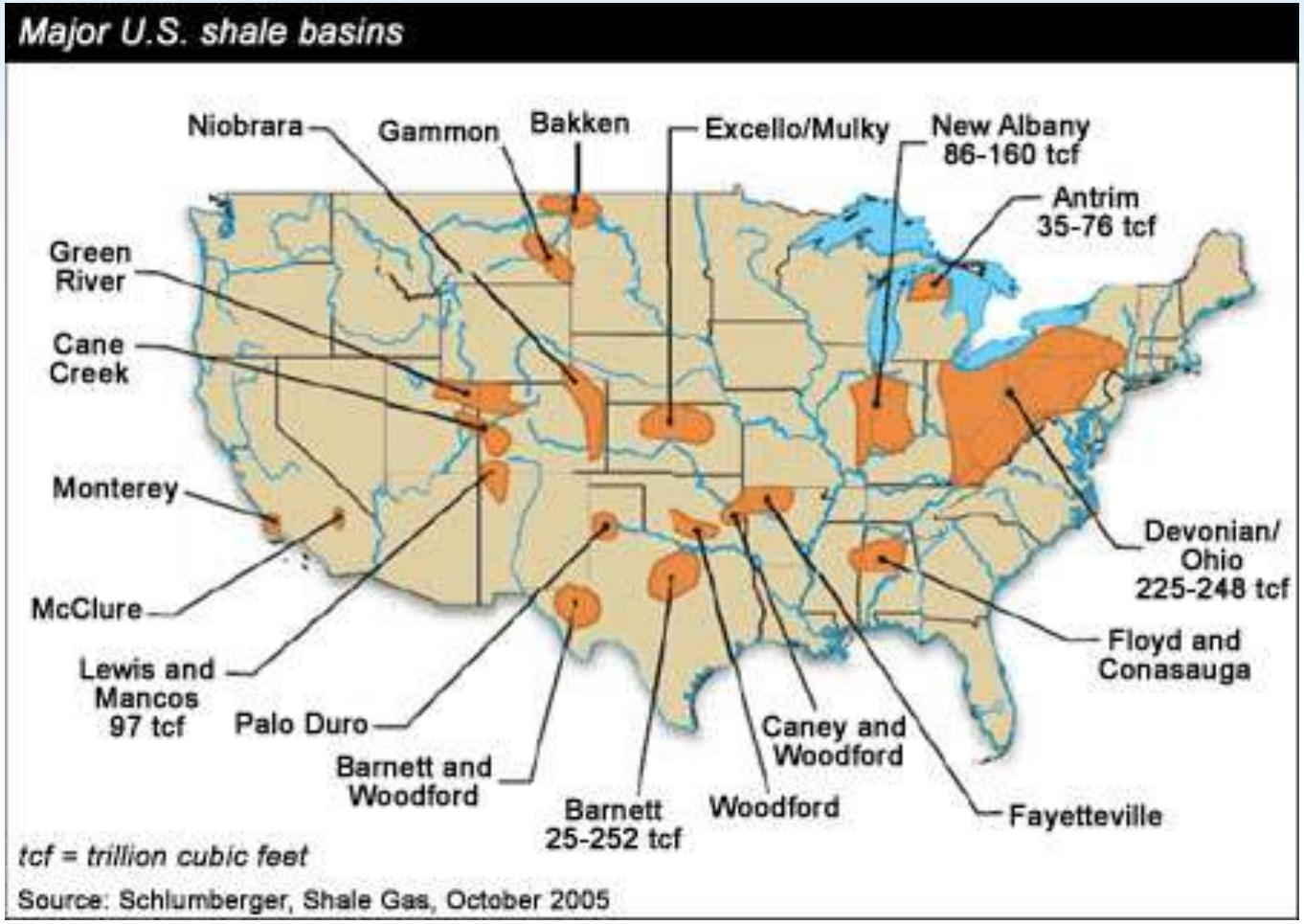
Where are we finding new gas?



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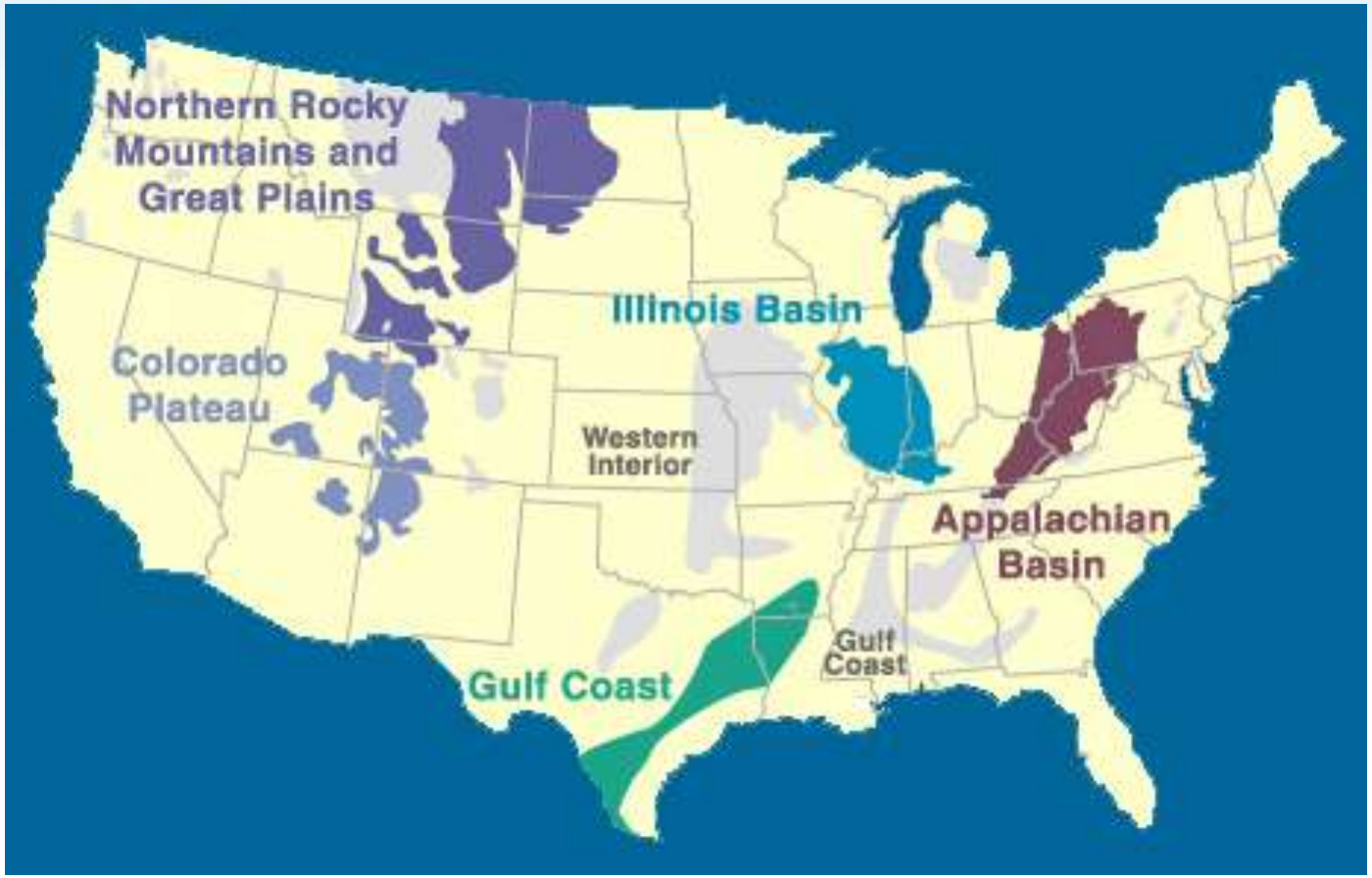
Where are we finding new gas?

US Coal Bed Methane Resources



Power River Basin reserve estimates of 20-30 Tcf

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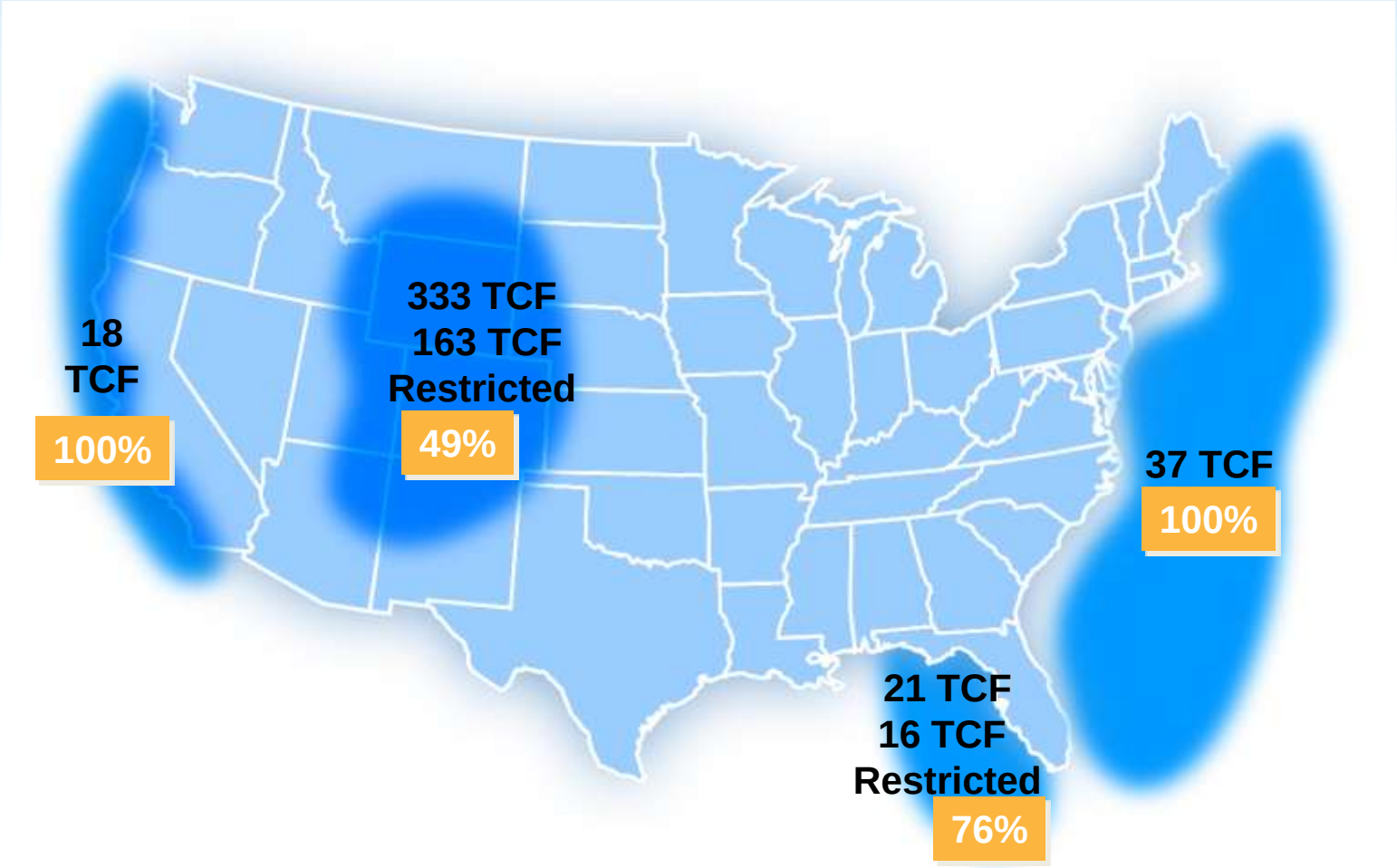
Are there restricted drilling areas?



Resource estimates from *Potential Gas Committee*, Colorado School of Mines, December 31, 2006 and *Minerals Management Service*. Intermountain west includes estimate of gas reserves from *Energy Information Administration*, U.S. DOE. Of 163 trillion cubic feet (TCF) noted as restricted, 50 TCF closed to development and 113 TCF available with seasonal and other restrictions.

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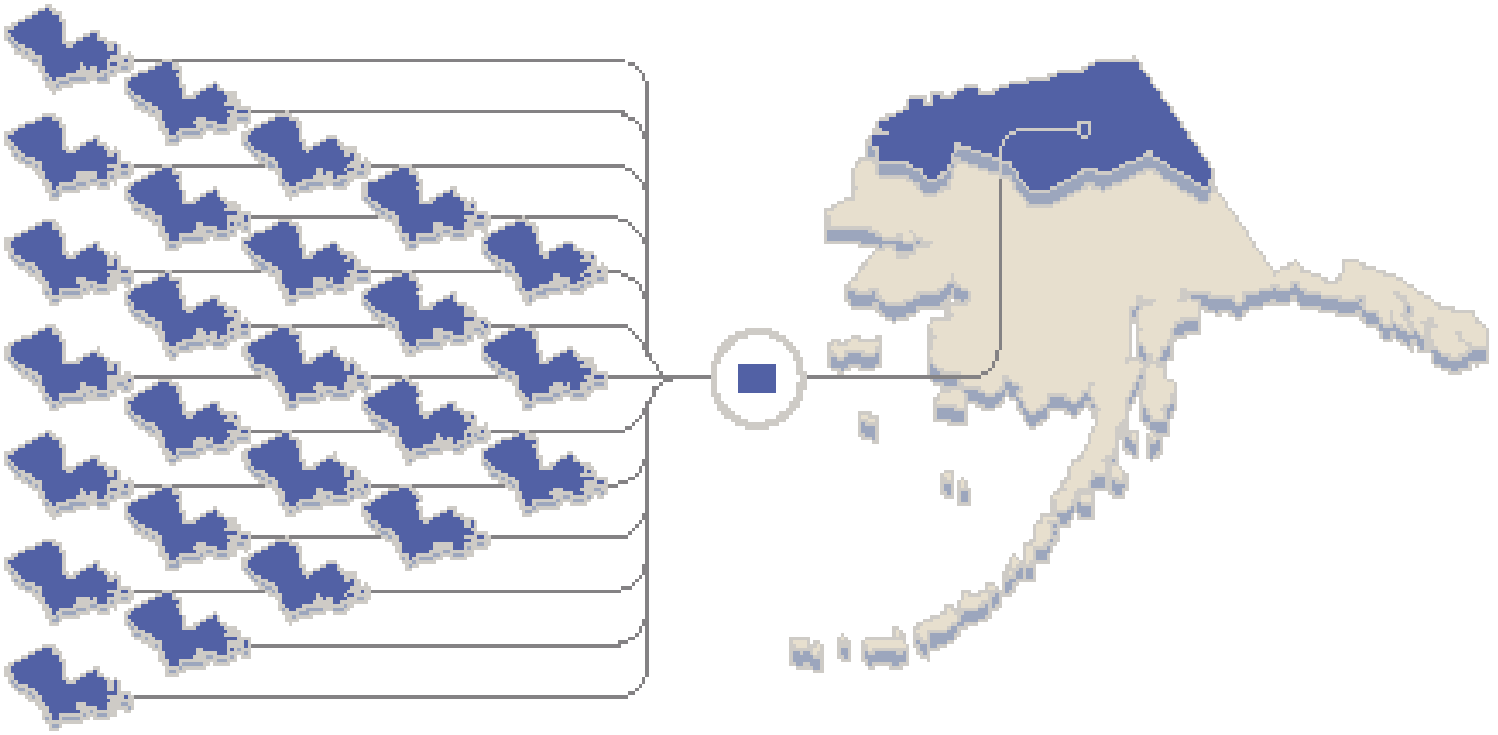
What about Alaska?



25 years of production from onshore Louisiana is equivalent to proved gas reserves on the North Slope of Alaska alone.

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What about Alaska?

- Up to 35 TCF of existing gas discoveries on the North Slope and 200 TCF in recoverable on shore gas reserves (10 year supply for the total US)
- Alaska Gasline Inducement Act passed in March 2007
  - State license granted to TransCanada (TC Alaska)
  - FERC granted a request for a pre-filing application to BP and ConocoPhillips (Denali)
  - Most agree that only one project will be built
- Approval and completion of the $30 billion project is still many years away

What is going on with LNG?

- LNG is natural gas that has been transformed from its gaseous state into liquid form (-260° F)
- World-wide LNG volumes growing each year - 2008 projected increase of 11%
- Japan, South Korea, and Spain have purchased 69% of 2008 LNG shipments
- U.S. re-gasification capacity of 9.6 Bcf/d is only operating at 17% since October 2007

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What is the weather forecast for this winter?

- WeatherBank, Inc says the 90-day temperature outlook is normal
- The NOAA January through March forecast is for above normal temperatures and average precipitation
- The Farmers Almanac says we are due for a “NUMBING” cold winter

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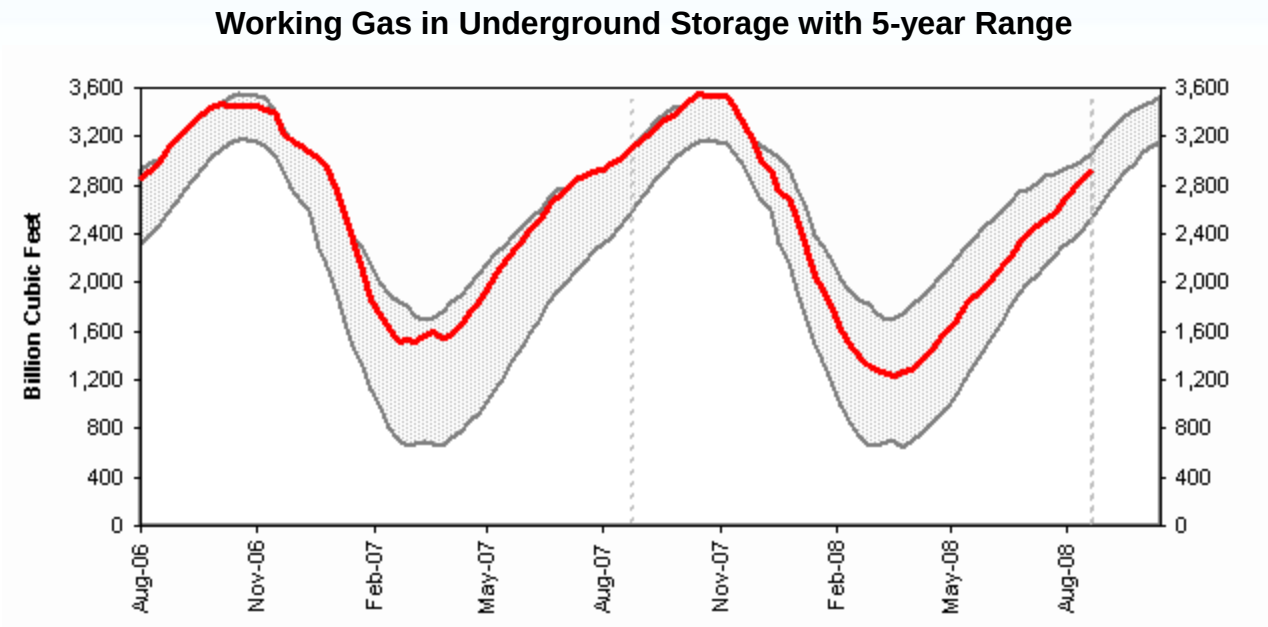
Where are we on storage for this winter?

- Winter 2007-08 was average
- By September 2008, storage was less than last year but above the 5-yr average
- Returning gulf production could result in 100 Bcf weekly injections for the remainder of the injection season



Source: EIA

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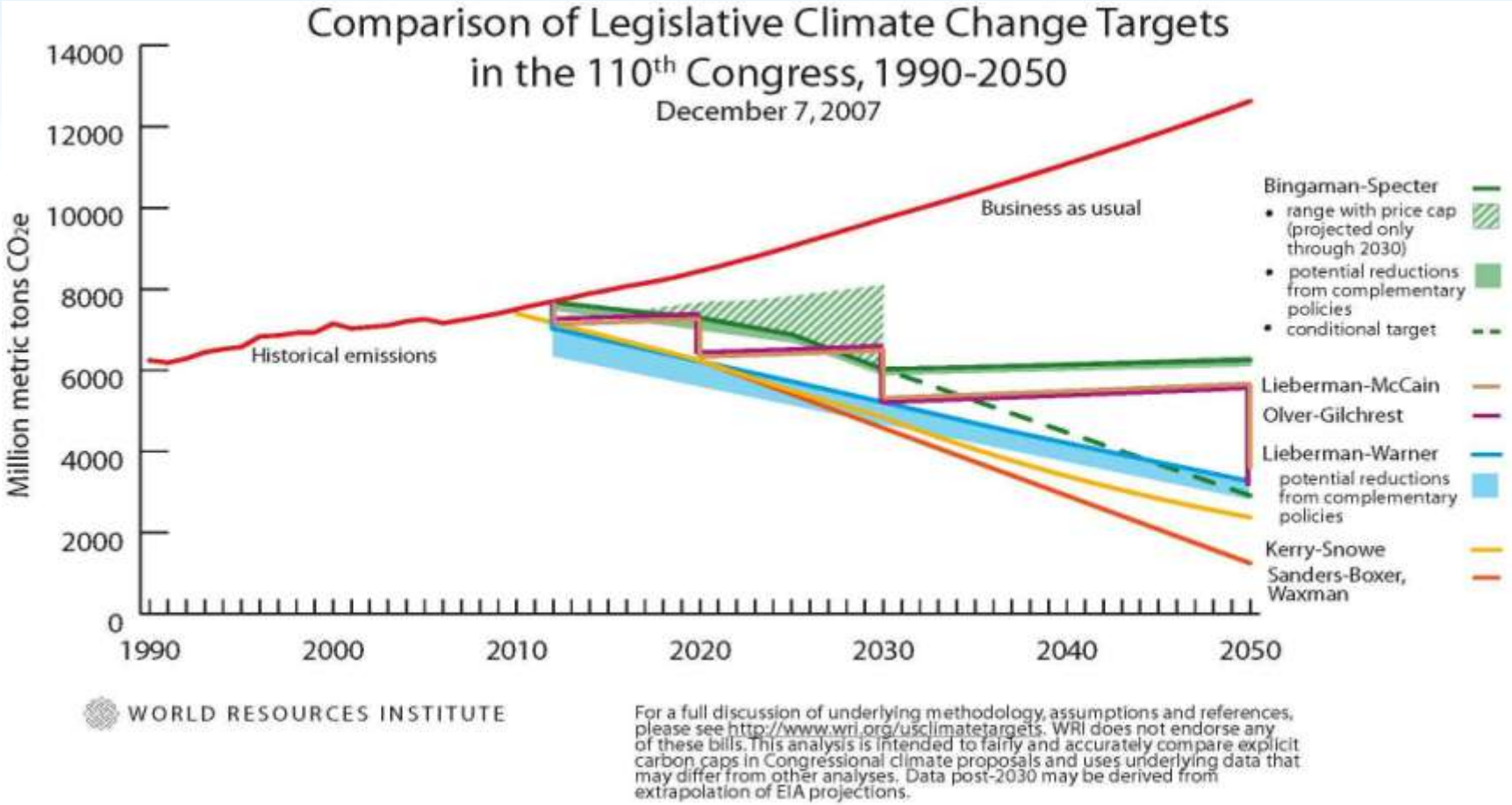
What's climate change legislation?



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What's climate change legislation?

- Most versions are based on "cap-and-trade" models
- Covered facilities must submit **emissions credits** for each ton of carbon they emit
- The amount of credits decreases over time
- A 70% decrease in carbon dioxide by 2050
- Coal would be impacted more than natural gas (Kansas electric production is 70% coal-fired)

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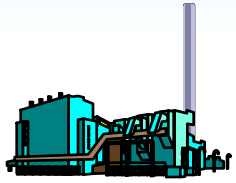
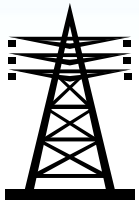
Natural gas delivers more energy and less CO_2

		Conversion	Distribution	Delivered To Customer	
27% Efficient	100 MMBtu Source Energy	88	29	27	
CO_2 emissions from typical household use* (tons)	1.5	9.3	0	0	Total CO_2 10.8
90% Efficient	100 MMBtu Source Energy	Not Applicable	92	90	
CO_2 emissions from typical household use* (tons)	0.6	Not Applicable	0.1	6.5	Total CO_2 7.1



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What's this Pickens Plan?

- Private industry would fund the installation of thousands of wind turbines in the Midwest wind corridor
- Public funding of an electric transmission super highway to move power to the population centers of the U.S.
- Natural gas for electric generation displaced by wind would be used to fuel thousands of CNG vehicles and reduce our dependence on imported oil

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Will we have natural gas long term?

- We have 100-150 years of natural gas reserves
- Higher prices tend to slow the growth in demand
- More rigs and better production technologies
- Production from shale basins and coal bed methane are impressive
- Pipeline projects are attracting capital
- Reduced drilling restrictions would increase access to federal acreage

We will have gas and demand will be met!

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Thank You!!

Your Questions

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